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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,258	08/29/2003	Alexander Vaschillo	MS303849.1/MSFTP449US	1975
27195 7590 01/03/2007 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			EXAMINER WOO, ISAAC M	
			ART UNIT 2166	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS			MAIL DATE 01/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/652,258

Applicant(s)

VASCHILLO ET AL.

Examiner

Isaac M. Woo

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 34-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to Applicant's Amendments filed on October 30, 2006 have been considered but are deemed moot in view of new ground of rejections below.
2. Claims 1, 4, 8, 9, 13-15, 18, 19, 21, 24 and 25 are amended. Claims 34-46 are withdrawn. And claims 1-33 are presented for examination for this office action.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 2106 (II) (A):

*A. Identify and Understand Any Practical Application Asserted for the Invention*

*The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a*

certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (*Brenner v. Manson*, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); *In re Ziegler*, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Claims 1-33 are non-statutory. Because independent claims 1 and 24 are system claims, which should have include *physical structure of the machine in terms of its hardware or hardware and software combination in claim body*. However the independent claims 1 and 24 include only software claim body, such as "representing a relational database ..... component ..... " is computer program software function that

are not embedded any a computer-readable medium and run by any a computer or machine. Therefore, claims 1-33 are software per se. Thus, the claims 1-33 are not a statutory and should be rejected under 35 U.S. C. § 101 as not being tangible.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetherbee (U.S. Patent No. 5,937,409) in view of Krishnaprasad et al (U.S. Pub. 2002/0078094, hereinafter, "Krishnaprasad").

With respect to claim 1, Wetherbee teaches, a system that facilitates representing a relational database in a different format (fig. 6, col. 10, lines 32-54), comprising a declarative description component (i.e., auto mapper, 500 in fig. 10A-B, col. 18, lines 53-67 to col. 19, lines 1-22) that generate a file (col. 17, lines 38-51) and facilitates generating data that represents the relational database (i.e., auto mapper generates data relationship, by relational mapper, 1110, in fig. 9, col. 16, lines 60-67 to col. 17, lines 1-51), the data is stored in a file (col. 17, lines 38-51). Wetherbee does not

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explicitly disclose data in an implementation-neutral, declarative format based upon an eXtensible Markup Language (XML) syntax. However, Krishnaprasad teaches XML syntax is used for implementation of neutral declarative format of relational database schema (page 1, sections 0007-0011, sections 0018-0019, page 4, section 0046). Therefore, based on Wetherbee in view of Krishnaprasad, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to utilize the teaching of Krishnaprasad to system of Wetherbee in order to represent relational database schema using XML syntax to user data management system.

With respect to claim 2, Wetherbee teaches the data is generated from relational database schema information (col. 3, lines 6-41).

With respect to claim 3, Wetherbee teaches the schema information is in the form of metadata (col. 3, lines 6-41).

With respect to claim 4, Wetherbee teaches the declarative description component derives logical and physical information from the relational database (fig. 5, col. 10, lines 14-31).

With respect to claim 5, Wetherbee teaches the physical information is harvested directly from schema information of the relational database (fig. 5, col. 10, lines 14-31).

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With respect to claim 6, Wetherbee teaches the logical information is generated with annotation information associated with the relational database (fig. 7, col. 11, lines 21-67).

With respect to claim 7, Wetherbee teaches the annotation information is obtained at least one of manually by a user and automatically by the system (fig. 7, col. 11, lines 21-67).

With respect to claim 8, Wetherbee teaches the logical information describes a relationship between at least two tables of the relational database (fig. 7, col. 11, lines 21-67).

With respect to claim 9, Wetherbee teaches the declarative description component is based upon an XML syntax (col. 5, lines 11-63).

With respect to claim 10, Wetherbee teaches the data is segmented into smaller data portions (fig. 7, col. 11, lines 21-67).

With respect to claim 11, Wetherbee teaches the data is segmented to allow logical extensions thereof (fig. 7, col. 11, lines 21-67).

With respect to claim 12, Wetherbee teaches the data is a logical view of metadata of the relational database (col. 4, lines 16-64).

With respect to claim 13, Wetherbee teaches the description component generates the data with sufficient metadata to allow generation and/or execution of create, read, update, and delete operations against the relational database (col. 4, lines 16-64).

With respect to claim 14, Wetherbee teaches the declarative description component derives physical information from the relational database to generate the data, which physical information is regenerated each time the description component executes against the database (col. 16, lines 60-67 to col. 17, lines 1-51).

With respect to claim 15, Wetherbee teaches the data is updated by executing the declarative description component against the database to overwrite the data (col. 16, lines 60-67 to col. 17, lines 1-51).

With respect to claim 16, Wetherbee teaches the updated data preserves user-supplied extensions (col. 16, lines 60-67 to col. 17, lines 1-51).

With respect to claim 17, Wetherbee teaches an application using the data initiates an update process of the data (col. 16, lines 60-67 to col. 17, lines 1-51).



With respect to claim 18, Wetherbee teaches a classification component that performs an automated function, the classification component employs at least one of a probabilistic-based analysis or statistical-based analysis to infer that an automated function be automatically performed (col. 16, lines 60-67 to col. 17, lines 1-51, col. 4, lines 16-64).

With respect to claim 19, Wetherbee teaches the automated function automatically determines at least one of when the data will be updated and what location will be updated (col. 4, lines 16-64).

With respect to claim 20, Wetherbee teaches the classification component is a support vector machine (col. 4, lines 16-64).

With respect to claim 21, Wetherbee teaches the automated function includes automatically annotating physical information representative of the relational database to generate logical information associated with the relational database (fig. 11, col. 19, lines 23-67 to col. 20, lines 1-37).

With respect to claim 22, Wetherbee teaches returning a degree of certainty that annotation of the physical information is correct (fig. 11, col. 19, lines 23-67 to col. 20, lines 1-37).

With respect to claim 23, Wetherbee teaches computer operating (fig. 13, col. 20, lines 37-67 to col. 21, lines 1-23).

With respect to claim 24, Wetherbee teaches system that represents a relational schema of a relational database in a different format (fig. 6, col. 10, lines 32-54),, comprising a declarative description component (i.e., auto mapper, 500 in fig. 10A-B, col. 18, lines 53-67 to col. 19, lines 1-22) that receives the relational schema in the form of at least metadata (i.e., metadata 185, fig. 1, col. 4, lines 42-64, col. 19, lines 23-54) and generates a data file representative of a logical view thereof (i.e., logical relational tables in fig 5A, col. 9, lines 32-67 to col. 10, lines 1-13). Wetherbee does not explicitly disclose a non-procedural, declarative format based upon an eXtensible Markup Language (XML) syntax. However, Krishnaprasad teaches XML syntax is used for implementation of neutral declarative format of relational database schema (page 1, sections 0007-0011, sections 0018-0019, page 4, section 0046). Therefore, based on Wetherbee in view of Krishnaprasad, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to utilize the teaching of Krishnaprasad to system of Wetherbee in order to represent relational database schema using XML syntax to user data management system.

With respect to claim 25, Wetherbee teaches the declarative description component derives logical and physical information from the metadata, which physical

information is derived directly from the metadata, and which logical information includes annotations of the physical information (i.e., logical relational tables in fig 5A, col. 9, lines 32-67 to col. 10, lines 1-13).

With respect to claim 26, Wetherbee teaches the annotation information is added incrementally (col. 9, lines 32-67 to col. 10, lines 1-13).

With respect to claim 27, Wetherbee teaches the data file is segmented into smaller data tiles to allow logical extensions thereof (col. 3, lines 7-41).

With respect to claim 28, Wetherbee teaches the data file is stored local to the database (col. 3, lines 7-41).

With respect to claim 29, Wetherbee teaches the declarative description component runs against the relational database from a location remote from the relational database (col. 16, lines 60-67 to col. 17, lines 1-51).

With respect to claim 30, Wetherbee teaches the relational database is distributed across at least two network locations such that the description component runs against each location database to generate respective data files (fig. 13, col. 20, lines 38-67 to col. 21, lines 1-38).

With respect to claim 31, Wetherbee teaches the respective data files are retrieved and processed to reconstruct the relational database (fig. 13, col. 20, lines 38-67 to col. 21, lines 1-38).

With respect to claim 32, Wetherbee teaches the data files are retrieved and processed by corresponding applications in a disconnected environment (col. 20, lines 38-67 to col. 21, lines 1-38).

With respect to claim 33, Wetherbee teaches the format is one of implementation-neutral and implementation-specific (fig. 6, col. 10, lines 32-54).

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M. Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Isaac Woo  
December 27, 2006